

1. (Amended) A silicon etching apparatus using XeF_2 , comprising:
a basic structure composed of a loading chamber for loading XeF_2 , an expansion chamber for collecting sublimated XeF_2 gas, and an etching chamber for performing an etching process; and
a means for injecting nitrogen to the loading chamber, the expansion chamber or the etching chamber and a means for exhausting nitrogen therefrom prior to the etching process to eliminate air moisture in the apparatus and thus preventing the formation of HF.
3. (Amended) The silicon etching apparatus using XeF_2 as claimed in Claim 1, further comprising a means for feedback controlling the internal pressure of the loading chamber at the level between sublimation pressure of XeF_2 and atmosphere pressure to prevent sublimation of the residual XeF_2 in the loading chamber after etching process.

Add new claims as follows:

- 5. A silicon etching apparatus as set forth in Claim 1 wherein said means for injecting nitrogen initially injects nitrogen to said loading chamber and thereafter to said expansion chamber and said etching chamber.
6. A silicon etching apparatus as set forth in Claim 1 wherein said means for injecting nitrogen initially injects nitrogen to said expansion chamber and thereafter to said loading chamber and said etching chamber.